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ABSTRACT

The conference reports contain summaries of five general sessions and five appended papers, all of which focus on the need and implementation of captioned television for the aurally handicapped. The keynote address states that approximately 10% of the population has hearing problems, indicating that there is a large minority group involved. The first general session relates attempts to identify the potential hearing-impaired audience in America and its demographic characteristics, and to clarify the position of the Federal Communications Commission on the question of captioned television. The demonstration of two possible television captioning techniques, involving both captions to aurally handicapped persons and normal video transmission to hearing persons, is discussed in the second general session. Covered in the third general session are short descriptions of selected television programs shown with captions, with note and problems of verbatim captioning. The fourth and fifth general sessions include coverage of recommendations for establishment and implementation of captioned television. Appended are related papers, one of which points out that it appears that the deaf audience must compete for television consideration on the basis of numbers, not of need. (CB)

ED 064828

# Summary Report

## National Conference on Television for the Hearing Impaired

December 14,15,16, 1971

EC 042 415

SOUTHERN REGIONAL MEDIA CENTER FOR THE DEAF
COLLEGE OF EDUCATION THE UNIVERSITY OF TENNESSEE KNOXVILLE

# PROCEEDINGS

# of the

# FIRST NATIONAL CONFERENCE

# on

# TELEVISION FOR THE HEARING-IMPAIRED

Conducted by the

Southern Regional Media Center for the Deaf

at

The University of Tennessee, Knoxville

December 14-16, 1971

Supported by funds from
Media Services and Captioned Films Branch
Bureau of Education for the Handicapped, Office of Education
United States Department of Health, Education, and Welfare, Washington, D. C.
in cooperation with the Department of Special Education and Rehabilitation
College of Education, The University of Tennessee, Knoxville

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# FOREWORD

When the Southern Regional Media Center for the Deaf was planning the first National Conference on Television for the Hearing Impaired, it was recognized that scheduling would be a critical factor in the degree of success realized. Had it been arranged six months earlier or later, the impact of the conference would, in all likelihood, have been lessened.

Four major developments were in the offing toward the end of 1971. The National Bureau of Standards was finalizing a project which inculcated the technological development necessary to provide captions for network televised programming without intrusion (i.e., imposing the captions on those who would rather not see them). The American Broadcasting Company Television Network was interested in this hypothesis to the extent of giving it a test run. The Southern Regional Media Center for the Deaf had secured the interest of the Media Services and Captioned Films Branch (of the Division of Educational Services, Bureau of Education for the Handicapped) in the prospect of captioned television. Meanwhile, various organizations serving the hearing impaired were urging that advocates of captioned television unite and pursue their goals in a national effort. These happenstances were not the only contributors to the timeliness of the December conference. Others were brought out in the following report.

The objective of the conference was to bring together sufficient resource people and pool sufficient pertinent information to congeal

efforts to establish television for the hearing handicapped and channel all major thrusts into a single unified front. The conference generated momentum which may well bring about consummation of the design laid down by Dr. William Jackson five years earlier--that is, electronic character generators producing captions keyed in over television programs which can be read by the millions of Americans who cannot hear the audio "half" of television.

Roger S. Perkins
Assistant Director
Program Development

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# KEYNOTE ADDRESS

Malcolm J. Norwood[1]

May I take this opportunity to extend to each of you a warm welcome from the Bureau of Education for the Handicapped and Media Services and Captioned Films. I am especially delighted to see so many of you here for this National Conference on Television for the Hearing Impaired. Most of you have hectic schedules which place great demands on your time. In spite of this, you are here. And this means you are interested. Your interest is gratifying for it means the objectives of this conference have a better than even chance of being achieved.

Statistics have shown that approximately 10 percent of the population has hearing problems. Consequently, there are 20 million hearing impaired persons in the United States, a rather large minority group. Let me read to you one of the many letters received by our office, a letter which is rather typical:

> Dear Sir:
>
> We are a family with an eleven year old deaf child. There are few TV programs that he can enjoy as it is very difficult to read the actors' lips. Karl would benefit from captioned documentaries because these programs would help him with his school work. Also, he would be a part of the family when we are enjoying a movie or special show. Sponsors should find that this programming will reach new audiences; in addition, the FCC advised that you show captioned news.
>
> When will you start doing this?

---

[1] Mr. Norwood, now Chief of Media Services and Captioned Films, not only has served the deaf professionally for many years but is himself deaf. His personal and professional experiences were reflected in the charge which he delivered to the assembly.

In a recent issue of TV Guide, there was an editorial which covered the efforts of KHTV in Little Rock, Arkansas, and WJTV in Jackson, Mississippi, to provide news to the deaf by using interpreters who translate the words of the newscasters into the language of signs. The editorial estimated that 6,000 deaf persons in parts of three states are reached by these two stations. This is a wonderful contribution, but I cannot help but wonder how many more people could be reached if these programs were captioned.

Not all hearing-impaired persons use or understand the language of signs. For example, there are those who have had normal hearing for the greater part of their lives, but have suffered loss of hearing from old age. Surely there are people in this audience who have an aged parent, relative, or neighbor whose hearing has deteriorated. In how many households has television viewing become a problem because Aunt Emma insists on turning the volume so high that the rest of the family gives up in exasperation? Not only is Aunt Emma left alone, but it is extremely doubtful that she can really understand the program, volume or no volume.

SESAME STREET made a great impact. Now we have the ELECTRIC COMPANY which is, for the most part, captioned television. Millions of youngsters are watching this program which is expected to result in better reading and language. I will not venture to guess how many adults also take the time to view this program. It does seem to me, however, that we are creating an audience that casually accepts captions. If captions hold this much promise, what would they do for millions of Americans, especially the disadvantaged and others who have language and reading problems!

I have no hard data, but when the Office of Education began to caption motion pictures for deaf children and adults some 11 years ago, the subtitles were geared to a reading speed of 120 words per minute. Believe me, we had our share of complaints regarding the speed of the captions. Approximately one and a half years ago, we unilaterally increased the reading speed from 120 words per minute to 144 for all films aimed at adult audiences. We haven't received a single squawk. I mention this to you as a matter of interest for if captions have contributed to the advancement of our deaf population, what will they do for the general population?

Not long ago Robert Lewis Shayon, the TV critic for the SATURDAY REVIEW, wrote an editorial on the need to provide captioned TV programs for the hearing impaired. Mr. Shayon mentioned that 75 percent of a test audience with normal hearing in Pennsylvania who had viewed two captioned programs said the subtitles did not bother them. The other 25 percent reported some distraction, but only 10 percent of that audience objected strongly to captions. Mr. Shayon also pointed out that the results of this experiment indicated that the more time these people spent viewing captions, the less bothersome they found them. Experimentation with captioned television could therefore not only benefit 20 million hearing-impaired people, but could also reap unexpected benefits for those who have normal hearing.

Frankly, I did not expect to be speaking to you today. In fact, I did not know I would be doing so until last Friday. As I was attempting

to put on paper a message that would set the theme for this conference, the year 1927 kept coming to mind. Now that was a great year. It was the year of Lindbergh's flight to Paris, Babe Ruth's 60 home runs, and the second Dempesy-Tunney fight which produced the first $2 million gate. It was also the year which made this conference necessary. Not only did Al Jolson's appearance in the Jazz Singer result in the end of the silent motion picture and its subtitles, but it was also the year in which Philo T. Farnsworth transmitted various graphic designs including a dollar sign via television.

I can remember very clearly a day in late 1939 or early 1940 when a group of students from the American School for the Deaf made a special trip to downtown Hartford, Connecticut, to see this miraculous wonder, television, demonstrated at a department store. I can clearly recall how another student and I ended up in front of the camera answering the announcer's questions in sign language. You can well imagine the excitement and how my fellow students were thrilled at having seen Don and me on a picture tube several stories below. You know, I never forgot that day because here was the future. No longer need I curl up with a book in the corner or fiddle my fingers while my hearing friends listened to The Shadow, Buck Rogers, The Green Hornet, Tom Mix, and other programs on the radio. Soon I and other deaf persons would be able to share these shows with them because they would appear on that wondrous picture tube. In my innocence, I didn't realize I would still need to hear to understand. More than 30 years have passed since that day, but all of us who lack

the ability to hear are still waiting for this miraculous wonder, television, to play its promised role.

We have overcome the problem of the Jazz Singer with captioned motion pictures. . . surely, there is some way that captioned television can also play a role in our lives. Perhaps it will be captioned reruns or perhaps it will be through some method of modifying the receivers so that captions will appear only on sets owned by deaf persons. In any case, modern technology has made a variety of approaches possible. I am confident that with your help and cooperation this conference will end with a definite plan of action.

Permit me to tell you one more story. One morning a wife went into the bedroom to wake up her husband who unfortunately was in a very ugly mood. Obviously, nothing would please him. "Simmer down," she said, "all I want to know is what you would like for breakfast." Snapping at her, he said, "Fry me one egg and scramble the other." As he sat down at the table he looked at her and said, "Darn you, you scrambled the wrong one!" There is no question in my mind that with the people who are assembled here the chance of scrambling the wrong egg is nigh impossible. Thank you for listening to me. Right now, it's your ball!

## GENERAL SESSION I

An attempt was made in the first general session to identify the potential hearing-impaired audience in America, its population and its general geographic as well as sociogeographic (urban vs. suburban) locations. Dr. Jerome Schein, Director of the Deafness Research and Training Center at New York University, stated that full statistical information must await completion of the National Census of the Deaf Population (now underway under his direction). He estimated, however, about 150 to 200 deaf persons per 100,000 population--more than triple the last rate published (1930) by the United States Bureau of the Census. Preliminary data from the new census indicate nearly 2 million people who cannot appreciate most television programs. The 1962-63 national health survey placed the highest rate for hearing impairment in the South, followed in descending order by the West, North Central, and Northeast regions. The rate was higher in rural areas, but actual numbers of hard-of-hearing and deaf people were greater in urban-suburban areas. Dr. Schein went on to discuss the possibilities in cable television for accommodating the needs of the hearing-impaired population (see Appendix B for complete address).

Attention then was turned to the position of the Federal Communications Commission on the question of captioned television to serve the nation's hearing-impaired viewers. Emphasizing that his remarks as Executive Director must not be construed as commitment on the part of FCC, Mr. John Torbet stated that his prime concern as a conference participant was in

visual emergency communications. He clarified the Commission's role as one of identifying and seeking solutions to problems, both economic and technical, in broadcasting. FCC recognizes the need for visual emergency messages from the President of the United States, for example, (see Appendix C) and also the desirability of enlarging the scope of this concept to include entertainment and other programs of interest to hearing-impaired viewers. Also recognized by the Commission are the contributions of its licensees to progress in this regard over the past year, the need for additional planning efforts, and the economic-technical problems to be faced. Mr. Torbet assured sympathy with the program under discussion at the conference and hope for immediate progress.

## GENERAL SESSION II

Two demonstrations of possible television captioning techniques were presented, both offering captions to deaf or hard-of-hearing viewers and normal video transmission to those who could hear the audio track. The HRB Singer Company's captioning method was created by altering the vertical deflection of a receiver and inserting the caption in what would ordinarily be video overscan (the first 12 lines of the video). Representatives of the Singer Company presented a videotape produced with this method. While the system did produce legible captions, one side effect of this technique was noticeable distortion produced in vertical linearity. In addition, it was possible that the upper part of the video signal might be cut off or blacked out.

Mr. Julius Barnathan, Vice President in Charge of Broadcast Operations and Engineering for the American Broadcasting Company's Television Network, pointed out two major areas of concern to him and presumably other network broadcasters. First, due to the variation of linearity scanning in general television sets, there was no guarantee that the captions would not intrude on the normal television set. An even greater technical problem pointed out by Mr. Barnathan was that a television receiver operated in this way, a way not normal to the system's design and construction, would undoubtedly reduce the longevity of the receiver. Advising people desiring captions to operate their receiver in this way is not something that a national broadcast organization would be willing to do.

With the cooperation of ABC studios in New York, conferees saw demonstrated a television captioning system recently developed by the National Bureau of Standards Time and Frequency Division at Boulder, Colorado. Mr. George Kamas, an electronics engineer on the project, and his colleagues had developed a method of distributing time and frequency signals via television broadcast. This new NBS TVTime System can provide (1) the time of day with automatic time zone and daylight time changes, (2) a precise electrical time pulse, (3) channel number displayed directly on the TV screen, and (4) printed captions. All of this information is carried in a part of the videoscan known as the vertical interval. The captioned information would not be seen on the home television receiver except by choice. By installing a small circuit in a home television receiver, however, the viewer could use a switch to choose the service he wants--or leave the switch turned off and have normal TV reception.

If implemented on major networks, the system potentially offers many new applications for television communications.

The NBS TVTime captioning system was demonstrated over the normal Tuesday evening broadcast of "Mod Squad." The captions, being produced in ABC's New York studios and clearly indicating the audio text of the program, did not interfere with normal broadcast but were received by the demonstration TV monitor at the conference. NBS engineers estimated that the simplest captioning display module, which may be available as early as 1973, would cost less than $20 and would have numerous options to assist hearing-handicapped viewers. Local television stations, as well as networks, would be able to buy the caption encoding equipment to provide their viewers with precise time of day information, captions, channel identification, and visual emergency messages. None of these services would interfere with normal viewing or broadcasting.

Following the presentation of both captioning systems, questions and answers brought out other salient points. Mr. L. R. Raish from the staff of the Office of Telecommunications Policy (OTP), Executive Office of the President, expressed "interest and encouragement on the part of persons high in the administration in seeing that technology, particularly telecommunications technology, is applied to aid the handicapped." Noting the representation of both consumers and skilled professionals at the conference, Mr. Raish applauded the "grassroots level" approach and extended encouragement on behalf of his office. He urged that the potential hearing-impaired audience be more explicitly identified. (See Mr. Raish's entire statement in Appendix D.)

Mr. Raish's question had been brought up earlier in small group discussions. The representatives of network broadcasting interests were particularly interested in a figure which could be substantiated since the influence of the actual hearing-impaired population would be felt in at least two areas relevant to nationally broadcast captions:

(1) Prospective manufacturers would be better able to defray the "tooling up" of receivers with a decoding capability while maintaining a low per unit price, and

(2) The degree of consumer increase as a result of captioned television commercials would possibly create more interest among program sponsors.

Mr. Joseph D. Wiedenmayer of the Alexander Graham Bell Association for the Deaf, Inc. was asked if he had any information relative to this question. Mr. Wiedenmayer responded that the exact figure will soon be coming from the National Census of the Deaf Population. Meantime, he cited estimates from the National Conference of Hearing Aid Manufacturers (18 to 20 million with some degree of hearing loss), the National Health Education Committee (one in every ten persons, or 20 million total), and the Department of Health, Education, and Welfare (8.5 million seriously impaired). He emphasized that "although most are only hard of hearing, 80 to 90 percent of these don't wear hearing aids, they can't understand speech on TV, and they need help just as badly as the profoundly deaf." Another participant pointed to the big market realized when added to those some 20 million hearing-impaired viewers are all the friends and relatives who want captioned television for them.

## GENERAL SESSION III

For the Wednesday morning session, a local television studio had been leased for playback of selected television programs for deaf audiences recorded on standard broadcast (2") videotapes.

"The French Chef" (PBS)

Mr. Roger Smith, of the WGBH Educational Foundation in Boston, presented a preview (Program I) of the 26 programs from this popular series which were being captioned for deaf audiences under contract with Media Services and Captioned Films. Describing plans for moving "into public consciousness," Mr. Smith pointed to other potential audiences for captioned television in addition to the hearing-impaired, for example, the approximately 10 million bilingual and 4 million educationally retarded persons who could benefit from captioning as a tool for language learning. Both Julia Childs and Mr. Smith's captions were applauded by the audience.

"Vision On" (BBC)

An example of this highly visual production from the British Broadcasting Corporation was presented by Mr. John Grogan, Account Executive, Time-Life Films, a subsidiary of Time-Life, Incorporated, which is currently negotiating the distribution of this program series in the United States. "This is a children's program," said Mr. Grogan, "and we have found that the age span of interest goes from . . . the very young preschoolers up to . . . the ten and above age groups." Although many components of "Vision On" and "Sesame Street" are comparable, Mr. Grogan pointed to an essential difference: there is not so much education

per se in this film as there is a goal of stimulating the children to think, to participate. What was spoken was also, for the most part, interpreted into sign language. The program in one form or another has been aired by BBC for about 18 years, and "they have perfected a system whereby deaf children or children with hearing impairment can totally comprehend this particular program."

Mr. Grogan mentioned additional program series from the British Broadcasting Corporation which were being considered for use in the MSCF distribution centers. The presentation of the selected "Vision On" program was enthusiastically received as a prime example of programming which considers the hearing-impaired child and makes accommodation for his handicap.

News, Weather, and Free Films

Mr. Roger Perkins, Conference Coordinator, presented three demonstration tapes captioned in various display modes by the Southern Regional Media Center for the Deaf. The first set (three emergency weather bulletins) illustrated the possibility of maintaining a small library of videotaped emergency notices so that appropriate visual warnings could be displayed on cue by local stations. The design used captions "crawling" across the bottom of the picture which consisted of an illustration with an interpreter. The rationale behind using both captions and interpreting was that low verbal deaf people may not be able to read the captions but hard-of-hearing people may not understand sign language. The interpreter also vocalized the information for the hearing audience.

Verbatim captioning of a free commercial film entitled "The Art of Making Fine Furniture" illustrated the problems of verbatim captioning aside from technical or "mechanical" questions. Finally, a captioned version of "The Big News" (courtesy of WBIR-TV, Knoxville) showed a third presentation mode of captioning wherein lines of word phrases rolled up across the lowest quarter of the television screen, keeping perfect pace with the announcer and transcribing the audio track verbatim.

These three demonstrations stimulated a great deal of discussion as they pointed up the dearth of reliable information available in the area of captioning. Among the questions raised were these:

How much of the sound track needs to be transcribed in captions?

How much conflict with the visual is tolerable?

Should the captions move?

Is verbatim quoting of people speaking necessary?

Should the reading ability of the audience be considered?

What program material, regardless of the degree of captioning, suitably should be captioned for the deaf? Who will decide this and how?

## GENERAL SESSION IV

On Wednesday afternoon, the assembly was divided into three groups, each including representation from the several interest areas and vantage points present at the conference under the broad rubric of consumer and industry. The aim was to generate constructive dialogue and cross-fertilization for bringing the conference to a viable conclusion next day.

Prior to moving into the separate group discussions, participants heard this charge from Mr. Norwood:

> Having become aware of the problem, let us zero in on it. . . . We want your recommendations on where to go from here, how to get there, and what we should do to achieve our objectives.

## GENERAL SESSION V

### I. REPORTS FROM DISCUSSION GROUPS

Group 1 (Larry Stewart, chairman)

These recommendations were submitted:

1. That a permanent organization (such as a university), on a contractual basis with the government, develop a professional staff to: (a) oversee and document all tests and evaluations; (b) develop and oversee a program to approach the work involved in these tests; (c) develop an approach for determining whether what we are talking about is a viable procedure in terms of a total network or local broadcasting or a mixture of the two.

   This organization should then be charged with developing, in coordination with all the groups represented at the conference, a petition for a notice of proposed rule-making, providing the problems involved can be addressed and backed up statistically.

   In addition . . ., parallel opportunities should be explored in the development of software and captioning . . . in a number of different places to determine . . . the most useful kinds of captions, regardless of how these captions are later delivered to the home viewer via television. The software analysis is as important as the hardware development.

2. That forces among commercial broadcasters who are at this time willing to cooperate be marshalled for broadcasting captioned and interpreted programming.

3. That the support of advertising organizations (such as the Association of Advertising Agencies and the Television Bureau) be sought.

Group 2 (George Propp, chairman)

The second group reported:

1. That, while it is recognized that various types of programming may need different solutions, the NBS TVTime System will be ready to go out for bids by July 1972 and some degree of urgency is necessary to assure that specifications for their chip will include a design for the captions. Obviously, it will be easier to get in on this now while it is in the development stage than later.

2. That we work with one front, one spokesman, and talk with the network people as quickly as possible. MSCF (Media Services and Captioned Films) will carry the ball, but we want to stress the importance of having a combination of consumers, industry, and education working together.

It was agreed that the major communication should be on a professional level all the way. The industry represented in this group exhibited a very high order of whole-hearted cooperation, and the group as a whole was very strong in its support of this concept of captioning television for deaf audiences.

Group 3 (Jane Brooks reporting for Gil Delgado, chairman):

1. Statement of the problem: Due to impaired hearing, a large segment of the citizens of the United States is denied its right to the invaluable education, social, and cultural benefits of television.

   Recommendation: That action be taken to allow the hearing impaired to profit, like their non-impaired counterparts, from this medium by the captioning of television programs. It is suggested that the following steps be taken to rectify this inequity: (1) assessment of needs and wants, (2) state of the art, (3) audience, (4) statement of goals, and (5) strategies for implementation.

2. Assuming that captioning is necessary and desired, it becomes the job of a task force to find the most appropriate means of meeting the following goals:

   a) To develop strategies for getting captioned programs on television;

   b) To develop a statement of policy on dimensions of captioning, based on research;

c) To investigate existing programs in order to determine the effectiveness of what is being done;

d) To coordinate all activities related to the movement of getting captioned television on the air;

e) To develop an on-going evaluation program of existing captioning procedures and a system of feedback and constant revision;

f) To establish an organization to enlist support of appropriate agencies, organizations, and individuals who can apply pressure if and when necessary to meet the goals.

3. Immediate needs include the following: (a) emergency information; (b) current weather and news; (c) existing programs with adapted captions, e.g., sports and documentaries; (d) new programs designed specifically for the hearing-impaired audience, e.g., entertainment, information, and education; (e) coordination, dissemination, and research through a single group working with an editorial board; (f) captioning done by skilled writers and linguistics people.

4. The "state of the art" subgroup listed methods of providing television for the hearing impaired: interpreter, amplification devices, and captioning. Further research is needed on (a) which presentation mode is preferable, (b) what other resources are or will be available, and (c) software.

5. The audience was defined as the deaf reader and the hearing-impaired reader, with emphasis on "reader" because captioned television was the presentation mode under consideration. To arrive immediately at one defensible set of figures to establish the size and characteristics of this audience, federal government and the private sector (agencies serving the hearing impaired) were suggested as sources.

6. Strategies for implementation start with appointment of a committee of well-qualified professional persons with expertise in media, television, and problems of the hearing impaired. Monitored by MSCF, this committee should be charged with carrying out the following tasks:

a) To develop a flow chart outlining the sequence of events and time frame for action;

b) To develop relationships and liaison to carry out communications with ETV, CATV, broadcast producers, and others;

c) To provide these agencies with information and demonstrations of developments;

d) To develop and monitor techniques and uses of captioned television:

1) establish procedures for writing and providing captions to users;
2) effect research on the most desirable and effective captioning methods;
3) plan criteria for program selection;
4) maintain contact with all agencies serving the hearing-impaired;
5) determine the size, location, and characteristics of the audience;
6) demonstrate the need and interest of the deaf community, including education of the general public.

## II. DISCUSSION AND CONCLUSIONS[2]

Representatives from two national television networks endorsed the recommendation common to the three group reports: name somebody to speak to the broadcasting industry (both networks and local stations) and demonstrate the technological developments which have been shown during this conference. "Show them what can be done, because there are hundreds and hundreds of broadcasters who just don't know that," urged Holcomb. The official spokesman must also have interface with the federal government and concern himself with legislation that will provide funds for the proposed large-scale captioning program. It was their firm suggestion, however, that the spearheading should be independent (i.e., outside government).

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[2]The conclusions of this conference were those of representatives from the deaf community and educators of the deaf only. Representatives of the broadcasting industry made it very clear that they were present as interested consultants without commitment on their part.

Several recommendations (not motions) from the floor can be summarized as follows (listed in order of frequency):

1. That we establish a small task force (or designate a single person) to follow-up on the conclusions of this conference by developing detailed plans and moving ahead;

2. That we go vigorously with the NBS system (not to the exclusion of other systems, but because it is immediately feasible and available);

3. That it is not our job in this conference to solve the problem, but to recommend the strategy for getting it solved.

Disclaiming the need for more talk or study or delay, Propp suggested that the conference charge MSCF (Media Services and Captioned Films) with responsibility for carrying out the directives already laid down in the small group reports. Norwood agreed to "take it from there," accepting the role of pivot man and keeping in mind the need for a task force as soon as funds can be found from any source. His summary of the recommendations was accepted by the conference:

1. Take a hard look at the National Bureau of Standards system as a possible way to go and continue efforts to make effective use of other delivery systems;

2. Set up a task force;

3. Keep communication lines open.

The final session ended with a vote of appreciation to the sponsors and participants "for having opened up what may be a new dimension in the lives of the hearing impaired."

DCCaldwell/jr

# APPENDIX A

CONFERENCE ROSTER

NATIONAL CONFERENCE ON TELEVISION FOR THE HEARING IMPAIRED

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James L. Collins, Assistant Dean for Developmental Education, National Technical Institute for the Deaf, One Lomb Memorial Drive, Rochester, New York

Gilbert L. Delgado, Dean, Graduate School, Gallaudet College, Kendall Green, Washington, D. C.

Dick D. Davis, Electronic Engineer, National Bureau of Standards, Boulder, Colorado

John Desmond, Vice President, Universal Education and Visual Arts, Division of MCA, Inc., 445 Park Avenue, New York, New York

Elizabeth Eastburn, Assistant to the Executive Director, American Association of Retired Persons, 1225 Connecticut Avenue, Washington, D. C.

Thomas Freebairn, Producer, Center for Analysis of Public Issues, 267 Harvard Street, Apartment 5, Cambridge, Massachusetts

Lloyd Graunke, Superintendent, Tennessee School for the Deaf, P. O. Box 886, Knoxville, Tennessee

John M. Grogan, Account Executive, Time-Life Films, 1271 Avenue of the Americas, New York, New York

John Hart, Vice President and General Manager, WBIR-TV, Knoxville, Tennessee

Elam Hertzler, Television Programming Task Group Leader, Educational Technology Staff, United States Office of Education, Department of Health, Education, and Welfare, Room 2620, ROB #3, 7th and D Street, S.W., Washington, D. C.

Grant Holcomb, Executive Assistant to Vice President, Columbia Broadcasting System, 6121 Sunset Boulevard, Hollywood, California

James L. Jespersen, Physicist, National Bureau of Standards, Boulder, Colorado

George Kamas, Electronic Engineer, National Bureau of Standards, Boulder, Colorado

Robert B. King, Senior Research Psychologist, HRB Singer, Inc., P. O. Box 60, Science Park, State College, Pennsylvania

Ginny Lewis, Interpreter/Program Specialist, Media Services and Captioned Films, Division of Educational Services, Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, ROB #3 - Room 2026, 7th and D Streets, Washington, D. C.

Ronald E. Long, Electronics Specialist, HRB Singer, Inc., P. O. Box 60, Science Park, State College, Pennsylvania

Leonard E. Maskin, Vice President - Administration, ABC Television Network, 1330 Avenue of the Americas, New York, New York

Anthony Mattia, Engineer, Systems Resources Corporation, Chiron Telesystems, 223 Newtown Road, Plainview, New York

Frank W. Norwood, Executive Secretary, Joint Council on Educational Telecommunications, 1126 16th Street, N.W., Washington, D. C.

Malcolm J. Norwood, Acting Chief, Media Services and Captioned Films, Division of Educational Services, Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, ROB #3 - Room 2026, 7th and D Streets, Washington, D. C.

Douglas Paddock, Graphic Arts Director, New York School for the Deaf, 555 Knollwood Road, White Plains, New York

Vincent Palacino, Instructional Design Specialist, Model Secondary School for the Deaf, Kendall Green, Washington, D. C.

Michael A. Policare, Director, Technical Operations and Special Projects, Paramount Television, 5451 Marathon Street, Hollywood, California

Joseph Prochaska, Financial Secretary, International Parents Organization, A. G. Bell, 8009 Corteland, Knoxville, Tennessee

George Propp, Secretary-Treasurer, National Association of the Deaf, 2418 St. Thomas, Lincoln, Nebraska

L. R. Raish, Office of Telecommunications Policy, Executive Office of the President, The White House, Washington, D. C.

John Reese, Program Director, WATE-TV, 1306 Broadway, N. E., Knoxville, Tennessee

Mary Jane Rhodes, Assistant to the Director, Council of Organizations Serving the Deaf, 4201 Connecticut Avenue, Suite 601, Washington, D. C.

Jerome D. Schein, Director, Deafness Research and Training Center, New York University, 80 Washington Square East, New York, New York

Mark Smith, TV Producer, 229 East 79th Street, New York New York

Newland F. Smith, Director of Planning, Systems Resources Corporation, 223 Newtown Road, Plainview, New York

Roger Smith, Producer, WGBH-TV, 125 Western Avenue, Boston, Massachusetts

Larry G. Stewart, Associate Director, Deafness Research and Training Center, New York University, 80 Washington Square East, New York, New York

P. D. Thompson, Sales, Systems Resource Corporation, 223 Newtown Road, Plainview, New York

Richard E. Thompson, President, Massachusetts Council of Organizations Serving the Deaf, 68 Brentwood Circle, Needham, Massachusetts

John Torbet, Executive Director, Federal Communications Commission, 1919 M. Street, N. W., Washington, D. C.

Donald Torr, Director, Office of Educational Technology, Gallaudet College, Kendall Green, Washington, D. C.

Joseph Wiedenmayer, Special Assistant, Alexander Graham Bell Association for the Deaf, Inc., 1537 35th Street, N. W., Washington, D. C.

Laurence C. Windsor, Director of Advertising and Public Relations, Sterling Manhattan Cable Television, 120 East 23rd Street, New York, New York

Joel D. Ziev, Director, Educational Media, American School for the Deaf, 139 North Main Street, West Hartford, Connecticut

# APPENDIX B

## WELCOME TO THE
## UNIVERSITY OF TENNESSEE, KNOXVILLE

Dr. Donald G. Hileman, Dean, College of Communications:

As a newcomer to Tennessee I have been tremendously impressed with what this University is doing in the way of communications for deaf people. I want to congratulate Bill (Jackson) and all of you here who are expressing concern in that general area. We will observe and watch and learn during this conference. I think we have on the campus of the University of Tennessee one of the finest colleges of communications. We are dedicated to excellence and greatness and, if we can be involved in any way in helping you achieve some of your goals, we would be pleased to have the opportunity. So thank you for allowing me to be here today. I will observe and listen and try to learn and be of help if I can.

Dr. James D. McComas, Dean, College of Education:

On behalf of the College of Education, we certainly want to welcome you to our campus and to this particular conference. We are proud to have the Southern Regional Media Center for the Deaf as one of our missions within the College of Education. It has been fun to see it grow and develop, and we have appreciated the kind of relationships that we have had with Dr. Lloyd Graunke and the Tennessee School for the Deaf. You may have an opportunity to talk with him about one of the joint ventures over

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[3]Opening luncheon, Tuesday, December 14, 1972, at the University Center. Presiding: Dr. William D. Jackson, Associate Professor of Education and Director, Southern Regional Media Center for the Deaf, The University of Tennessee, Knoxville.

in West Tennessee, where we are trying to do some planning with him and his staff and the State Department of Education on the location of another physical facility and program for the deaf that will serve Middle and West Tennessee. We have appreciated the kind of interest we have had from Dr. Graunke's staff and others within the University campus. We have had cooperation from the College of Communications and technical help from your people and others on the campus. So we are grateful to share in this kind of joint development.

Our College of Education is a rather large one. We have about 5,000 students enrolled in teacher education programs, and we have some 600 full-time and 700 to 800 part-time graduate students. One of our missions is to try to serve the field of Tennessee and the profession, and the Media Center is one of our efforts to make state and regional contributions. Our School Planning Lab, which some of you may be acquainted with, has planned facilities in over 26 states. We have programs ranging from music and art education to a curriculum for disability examiners. So our college is rather broad, it is rather diversified, and we see our mission as being a bit more comprehensive than just the preparation of classroom teachers and typical personnel.

We are proud to have you on our campus for this conference. We hope it is a very successful one and that your presence here will make it so. Thank you very much.

Dr. Walter R. Herndon, Vice Chancellor for Academic Affairs:

We are indeed happy to have such a distinguished group of participants from all over the country for this very important occasion. The University of Tennessee is a statewide system of higher education, serving all the people of the State. We say the State is our campus. The parent campus at Knoxville spawned this statewide system, which now is comprised of five primary campuses. There is a medical unit in Memphis; we have also in West Tennessee programs in pharmacy, nursing, and allied health programs supporting the basic health program. At Martin we have a campus aimed principally at undergraduate education. A new campus in Nashville begins its operations primarily after 4 o'clock and runs into the evening; the objective there is to serve the working adult. In Chattanooga we have a four-year campus which has some limited graduate education; it was formerly a private institution and became part of the University of Tennessee system about two years ago. This (Knoxville) campus remains the comprehensive campus of the University with the triple mission of teaching, research, and service. It is here that we expect to have those highly specialized undergraduate baccalaureate programs and programs at the master's and doctorate levels in all of the professions except medical. It is here that we look for the leadership in these very specialized areas of education, as we see illustrated by our involvement in this very important project. Again, let me express my most cordial welcome to you.

Dr. W. Lloyd Graunke, Superintendent, Tennessee School for the Deaf:

With the consultant assistance of staff members of the Southern Regional Media Center for the Deaf here at the University, we have been able to develop at the Tennessee School for the Deaf what we think is a rather exemplary program utilizing the video mode in the educational process. We have a system of closed-circuit television with three channels of distribution on a cable-antenna-system principle. We can send out simultaneously three programs to the receivers that are located in all our classrooms and day-room areas of our dormitories. In so doing, special programming for the students can be distributed either during the school day or in out-of-school hours. For example, we are presently captioning the Today Show news every day, and within an hour playing it back on our system, so that when the children come to school at 8:05 in the morning they get to see the morning news with captions. Now this kind of thing to us hearing people might seem to be not too important, but when you realize that deaf people normally are not able to keep up even with current daily news events when they don't hear the audio track of television or radio and must wait on the printed medium generally in order to be filled in, you can imagine--with the rapid pace of news and information--how far behind and even confused and apprehensive they might become.

We also take a number of classroom lessons off the educational television channel here. We caption those and then play them back at the schedule and pleasure of the teacher. Having three channels allows us a great deal of flexibility. It also allows us to have three different

language levels: primary, intermediate, or junior-senior high school. We also have a program called "Living Language," in which teachers and children are using the video mode. The deaf students are involved and stimulated to develop their communication skills through these and other projects. We will be glad to arrange for any of you who want to visit and see what we have. Thank you.

Dr. Jackson:

There's an old Chinese proverb saying that every thousand mile-journey begins with a single step. During this national conference, we hope to take that step into the future as we look at what television can do for the deaf.

It is a real pleasure now to turn the meeting over to Mac Norwood. I can personally say that my experience with the deaf started many years ago with contact with Marshall Hester and Mac. It has been a real pleasure to work with him and to see his growth and development as a leader in the field. I am happy to have him here as the Keynote speaker for this conference.

So Mac, welcome. (See Keynote Address, p.1.)

# APPENDIX C

# The Deaf Television Audience

Jerome D. Schein[5]

It is significant that one of the opening papers at this National Conference on Television for the Deaf should focus on the question: How many potential deaf viewers are there in the various television markets?

That question seems to imply that the deaf audience must compete for consideration on the basis of numbers and not need. Is it not strange that access to a public resource like the micro-airways can be governed by a Neilsen rating? I hope that nothing I will say in this paper will reinforce such an idea, for the size of the deaf audience alone should not be the measure of its rights to participation in our society.

With a sophisticated group such as you are, I need take only a few moments to sort out the population about whom we are concerned. Approximately 5 million of our citizens have a hearing loss great enough to be noticed by themselves. About 1.7 million cannot hear and understand most conversational speech. Of these, more than half (say 900,000) have no usable hearing for speech. Those who lost their hearing before they completed their formal education--they are the ones for whom we often reserve the term "deaf"--add up to between 300,000 and 400,000.

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[5]Dr. Schein is Director of the Deafness Research Training Center at New York University. His address was delivered at the conference's first general session.

You will notice that the final total yields a rate from 150 to 200 deaf persons per 100,000 population. That is more than triple the last rate published, in 1930, by the U. S. Bureau of the Census, and it is much larger than the one-per-thousand rule of thumb many of us have accepted. I would like to give you a more precise rate, but I cannot, because the National Census of the Deaf Population is only midway in its research. However, a preliminary analysis of the data points in the direction I have indicated: rates from previous studies grossly underestimate the prevalence of deafness in the United States.

For our purposes in this conference, we are interested first in knowing how many persons will not be able to enjoy television as it is now designed. The audio-dependence is great. Try to follow a television program, especially a newscast, with the sound turned off. Without the commentary, the visual component is frequently incomprehensible. A picture of a bombed building in Londonderry does not look much different from one burning in Detroit.

Lipreading is impossible, when the speaker is invisible or has his back to the camera. In panel shows the camera often turns to the person being questioned while the questioner is still speaking. No wonder some deaf people refer to television as "radio with some pictures." The audience which presently cannot appreciate most television programs, then, amounts to nearly 2 million people.

Now we need to take another criterion, age at onset, to determine how many of the 2 million or so will understand manual communication. It is in response to that question that we could estimate about 300,000 deaf

persons; i.e., most of those who lost the use of their hearing to understand speech before they completed school will have learned to read signs and fingerspelling to some extent. There are exceptions, of course. But there are also hard of hearing persons who can use manual communication, so I would guess that 300,000 is a conservative estimate.

Where is the deaf audience located? The 1962-1963 National Health Survey[5] indicates that the prevalence rates for hearing impairment are highest in the South, followed in descending order of severity by the West, North Central and Northeast regions. The numbers of hard of hearing and deaf people are greater in urban-suburban than rural areas, through the rates, as is true of most health problems, are higher for rural areas. Little discount need be made from the 2 million estimated viewers to account for those hard-of-hearing and deaf persons outside the range of television reception, either over-the-air or via cable. An estimate of television-set ownership, however, must await the results of the National Census of the Deaf Population.

Let us turn now from this preoccupation with numbers of people to the consideration of numbers of a different sort. In any given area today it is only possible to have at most 12 over-the-air television stations, both UHF and VHF. The nature of the TV signal prevents more from being satisfactorily broadcast. However, when the TV set is wired into community antenna television (CATV), the number of possible channels increases to at

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[5]Characteristics of Persons with Impaired Hearing. National Center for Health Statistics, Series 10, Number 35 (Washington, D. C.: U. S. Government Printing Office, 1967), p.64.

least 82! The difference between 12 and 82 is the difference between a precious resource to be expended only for huge audiences and a relatively common one available to small groups.

The deaf community is small relative to the general population. With only one or two members per thousand population, deaf people cannot make a strong case for their needs to be served by the limited over-the-air television capacity. But when an area can have 82 channels, it becomes reasonable to request that one channel be set aside for the deaf community.

That the exciting technical possibilities of CATV can be converted into a practical reality is already demonstrable in New York City. Under the terms of their franchises, the two CATV licensees on Manhattan are required to provide three public-access channels. Two channels are scheduled at the discretion of the city government. The third must be made available to any special-interest group in the city. And that is where deaf people enter.

Since September of this year, the New York University Deafness Research and Training Center has sponsored two hours per week on prime time. Tuesday and Thursday evenings, from 8:00 to 9:00, we present the Deaf Community Hour on the public-access CATV channel. Those of you familiar with television production will appreciate some of our problems. With limited funds, we are only attempting to explore the province of teleVISION--of seen-but-not-heard programs. We look forward to support for the research which begs to be done. For now, we are satisfied to demonstrate the potential for a channel devoted to a deaf audience. CATV, with the accompanying increase in channel capacity, can be a great boon to deaf viewers. True, much can

be done to make present television programs meaningful without sound. You will agree, however, that no major channel is apt to devote an hour or two to the forthcoming convention of the National Association of the Deaf. No station will cover the International Games for the Deaf. Think of all the events--sports, conventions, debates of issues--which are interesting to deaf people. Very little, if any, time is apt to be given to such events. Yet, until there are programs developed for deaf audiences, television will not have fulfilled the reasonable expectations of the deaf community.

I do not mean to foreclose on the many opportunities to improve over-the-air television. You will no doubt spend much of your time discussing them. But along the way, I hope you will also consider "the big payoff": a channel exclusively for deaf audiences.

# APPENDIX D

## THE USE OF TELECASTS TO INFORM AND ALERT VIEWERS WITH IMPAIRED HEARING[6]

The Commission's attention has been directed to the need of deaf persons, and those with impaired hearing, for information concerning emergency situations which may affect safety of life or property, as well as their desire to benefit from news, information and entertainment programs . . . .

. . . . . .

The material which persons with impaired hearing need and desire to receive via telecasts falls basically into two categories--first, rapid receipt of emergency information which concerns the safety of life or property, and second, the receipt of news, information and entertainment. In respect to the need of all citizens <u>including the deaf and hard of hearing</u> for information concerning <u>emergency situations</u>, we are convinced there can be little argument. We suggest to TV broadcasters that they make use of visual announcements along with oral announcements when presenting bulletins of an emergency nature, such as approaching tornadoes, windstorms, hazardous driving conditions, escaped convicts, industrial accidents, health hazards and other community dangers. These visual announcements would not only provide an alert to persons with impaired hearing, but would also emphasize the importance of the announcement to all viewers. . . .

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[6]Federal Communications Commission, <u>Public Notice 70-1328</u>, December 17, 1970 - B (excerpt).

We wish to emphasize that it is the responsibility of each licensee to determine how it can most effectively meet the needs of its viewers. We have not adopted and do not propose definite rules on this subject, and this Public Notice is advisory in nature. The above are suggestions of program presentation techniques which could assist a segment of our population, suffering from a significant handicap, and make the tremendously powerful television medium more useful to them. We believe that these techniques can be applied, to a significant degree, without interfering with the station's service to its general audience, and urge broadcasters to explore them and apply them to the extent feasible . . . .

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We hope that this Public Notice will alert licensees to the importance of making television a truly valuable medium for the hard of hearing, and of our concern about the matter. We will observe developments in this area in the near future, and if the situation does not develop satisfactorily, it may be necessary to begin rule making looking toward the adoption of minimum requirements.

# APPENDIX E

## STATEMENT BY L. R. RAISH[7]

The work you are about to undertake is important as it can result in bringing the joys of television to a vast new audience. As you go about your work, I want you to know that there is interest and encouragement on the part of persons high in the Administration in seeing that technology, particularly telecommunications technology, is applied to aid the handicapped. Both Mr. C. T. Whitehead, the President's Director of Telecommunications Policy, and Dr. Edward David, the President's Science Adviser, have indicated strong interest in the subject, particularly in this interest has been stressed, (1) the availability of auditory training aids for persons with severely impaired hearing and (2) the greater uses of captions in television broadcasting (the principal subject of this conference).

Both these areas in the "Washington structure" come under the regulatory purview of the Federal Communications Commission. . . Thus the role of our Office is one of providing encouragement to keep efforts moving forward in the telecommunications area on behalf of the hearing-impaired. Just on December 2, 1971, Mr. Whitehead expressed officially to the Chairman of the Federal Communications Commission the views of the Administration which are to strongly support "activities to accommodate and foster new technologies, devices, and aids for the handicapped." He noted the two points that I just mentioned (auditory training aids

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[7]Mr. Raish is in the Office of Telecommunications Policy, Executive Office of the President. His remarks were heard during the second general session.

and television captioning) and concluded with the statement that we want to encourage the Commission and the industry to continue their fine efforts in this important field."

By my presence here on behalf of the Office, I want to extend this encouragement. You have assembled at this conference talented and skilled professional persons, largely from the private sector, who are in position both to provide superb advice and then to do something about the decisions you reach. I emphasize that you who have organized this conference are going at the subject in the right manner. You are out to accomplish something at the "grassroots" level where, in my opinion, the most responsive results can be achieved. At this meeting you have brought together those who represent the "needs" and those who can "do something" about those needs. Seeking a solution by working in the private sector, as I see it, will get you the best solution and for this reason, on behalf of the Office, I encourage you to go forward with the course of action you have started. This, in my opinion, is much more the preferred route rather than to attempt achieving your aims through legislative fiat or through Rulemaking by the FCC to force the industry to do something.

The practical fact is that broadcasters are businessmen who are out to best serve their customers. They have a fine record of being interested and responsible citizens--but they must know your needs in order to be responsive. We have seen a superb demonstration of industry responsiveness by one of the major networks here tonight. So my advice is to keep right on working with the broadcasting industry and then "pass the work" to the

membership of deaf organizations and associations to keep broadcast station owners apprised of their needs. When a station puts on a program that is well captioned or otherwise adapted so that the hearing-impaired can enjoy it, let the owner know about it with a show of letters, postcards, and phone calls--a sort of hearing-impaired "Neilsen rating." When a station owner or a network foes to this extra effort, those responsible for programming want to know about it. With assurance that such programs are in fact being watched, it is only good business and service satisfaction for him to continue.

In closing, I would like to pose a question as to how many hearing-impaired persons are we talking about? During the discussions so far, we have heard various statistics. It is important from my standpoint and the Broadcast interests represented here are entitled to know with a reasonable degree of certainity the numbers of our United States population that are affected. . . .